



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,686	07/31/2001	Ghassan E. Jabbour	211603US20	1162

22850 7590 08/14/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

BUEKER, RICHARD R

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/917,686

Applicant(s)

JABBOUR, GHASSAN E.

Examiner

Richard Bueker

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-9, drawn to an apparatus, classified in class 118, subclass 726.
- II. Claims 10-20, drawn to a method, classified in class 427, subclass 255.6.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used for other purposes, such as vaporizing an inorganic material.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Umbach on August 9, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Art Unit: 1763

The claims recite an apparatus for purifying a crude material, but the composition of the crude material is not properly disclosed in the specification. The specification at page 6, lines 22-24, describes a residue 6, consisting of impurities, but fails to explain what kind of impurities that applicant intends for his apparatus to remove from the crude material that he intends to purify.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mead (3,650,823). Mead discloses a crucible (Fig. 1) comprising a non-metallic material (col. 2, lines 47-49) of the type claimed in claim 3, and having a glass wool baffle as claimed. The crucible of Mead is heated by an electric resistance heater (col. 2, lines 50-53) as recited in claim 9. The crucible of Mead has an inherent capability of being used according to the intended use recited in claim 1.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi (JP 54-96360) taken in view of Mead or Tanabe (US 2001/0008121). Kikuchi (Figs. 1-3) discloses a crucible for vaporizing a material, the crucible having a glass

Art Unit: 1763

wool baffle in the crucible above the bottom of the crucible. Regarding the material of construction of the crucible, Mead (col. 2, lines 47-49) and Tanabe (para. 25) teach that ceramic materials such as those recited in claim 3 are well known refractory materials that are conventionally used for high temperature crucibles. It would have been obvious to one skilled in the art to construct the crucible of Kikuchi from one of these well known refractory materials. Regarding claim 9, Mead teaches the use of an electric resistance heater to heat a furnace to a high temperature and it would have been prima facie obvious to use such a conventional heater as the heater of Kikuchi.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greer (5,104,695) taken in view of Kikuchi (JP 54-96360), Nichol (3,603,285), Howson (Journal of the Optical Society of America) and/or Powell (Vapor Deposition). Greer (Figs. 1-3) discloses a crucible for evaporating a source material wherein a baffle is placed in the crucible near its outlet to prevent particulates or droplets from exiting the crucible. Greer suggests using a resistive heater (col. 3, line 58) to heat the crucible. Greer (col. 3, lines 38-47) generically describes his baffle as a material that is "optically opaque, but provides a porous mass of material for reception of the vaporized material 19", but does not specifically suggest the use of glass wool as the baffle material. Kikuchi (Figs. 3a and 3b, abstract) also discloses an evaporation crucible having a baffle comprised of a porous mass to prevent non-evaporated particulates or droplets from exiting the crucible. Kikuchi specifically suggests the use of glass (quartz) wool as the baffle material. Also, Nichol (col. 3, lines 33-34) teaches that it was known in the prior art to use glass wool as a baffle in an evaporation crucible. Also, Howson (page

Art Unit: 1763

272, col. 2, lines 7-10) teaches that spitting from a vaporizer can be prevented by using a glass wool baffle. Also, Powell (page 271, lines 5-9) teaches that glass cloth can be used as a baffle to prevent particulates or droplets from exiting an evaporation crucible. It would have been obvious to one skilled in the art to use glass wool as the material of Greer's baffle, because Kikuchi, Nichol and/or Powell teach that glass wool can be successfully used for Greer's intended purpose. Regarding the material of construction of Greer's crucible, Greer teaches (col. 3, lines 2-3) the use of a conventional crucible. Also, Nichol discloses (col. 4, lines 4 and 14) that evaporation crucibles can conventionally be made of materials such as quartz or boron nitride, and it would have been prima facie obvious to use these conventional crucible materials for Greer's crucible.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greer (5,104,695) taken in view of Kikuchi (JP 54-96360), Nichol (3,603,285), Howson (Journal of the Optical Society of America) and/or Powell (Vapor Deposition), for the reasons stated in the previous paragraph rejection above, taken in further view of Spahn (6,237,529). Spahn discloses (see Figs. 7 and 8, for example) an evaporation crucible for evaporating organic source material, and he teaches (col. 1, line 52 to col. 2, line 17) that the organic source material is subject to particulates or droplets undesirably leaving the crucible. He teaches that this problem can be solved by placing a baffle in the crucible in front of the outlet to prevent the particulates or droplets from exiting the crucible. It would have been obvious to one skilled in the art to evaporate the organic material of Spahn in a crucible of the type taught by Greer wherein the

Art Unit: 1763

porous mass baffle was made of glass wool as taught by the cited secondary references because Greer teaches that his type of baffle eliminates the problem described by Spahn of organic material particulate or droplets undesirably exiting an evaporation crucible.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (703) 308-1895. The examiner can normally be reached on 9 AM - 5:30 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Richard Bueker
Primary Examiner
Art Unit 1763

August 21, 2003